

REMARKS

Claims 24-28 and 33-44 are presently in the application. Claims 1-23 and 29-32 have been canceled.

In the most recent Office action, claims 15-23, 29, 31 and 32 have been rejected under 35 U.S.C. 112, first paragraph, as being based on a non-enabling disclosure and under 35 U.S.C. 112, second paragraph, as indefinite. The examiner finds that the "leakage groove" or fluid communication between the interior of the vessel and chamber is essential to practice the invention, but not included in the method claims. The examiner also finds claim 15 to be indefinite or incomplete because it lacks positively recited method steps that provide the selective excitation of plasma in the interior and exterior of the vessel.

These rejections have now been made moot, because claims 15-23, 29, 31 and 32 have been canceled and replaced by new method claims 33-44 written more along the lines of typical method claims in a US application.

Claims 15-23, 29, 31 and 32 were also rejected under 35 USC 103(a) as unpatentable over Fayet et al (WO 97/44503) in view of either Menashi (US 3,383,163) or Darras (WO 99/49991 or US 6,919,114).

This rejection is also moot in view of new claim 33. Further, none of the references teach the steps of establishing and maintaining a gas pressure gradient between gas pressure in the interior area of the vessel and gas pressure at the exterior area of the vessel inside the chamber such that the plasma can be excited only in a first region of the vessel, said first region being either the interior area of the vessel or the exterior area of the vessel; exciting the plasma for a length of time sufficient to effect sterilization in only the first region of the

vessel; adjusting the pressure gradient between the gas pressure in the interior area of the vessel and the gas pressure at the exterior area of the vessel inside the chamber such that the plasma can be excited only in a second region of the vessel, the second region being the other of the interior area of the vessel and the exterior area of the vessel, while simultaneously extinguishing the excitation of the plasma in the first region of the vessel as recited in claim 33.

Reconsideration of the rejections of claims 24, 25, 27 and 28 under 35 U.S.C. 103(a) as unpatentable over Fraser et al (US 3,851,436) in view of Hoeck (US 4,544,529) or Schultze (US 2,501,193) and of claim 26 under 35 U.S.C. 103(a) as unpatentable over Fraser et al in view of Hoeck or Schultze in combination with Schroeder et al (US 6,328,928 or WO 98/30491) is respectively requested.

Independent claim 24 is directed to an apparatus for sterilizing vessels comprising, inter alia, “a cone (4) providing a seat for mounting a vessel within said chamber, said cone (4) having a groove (5) on its exterior surface in the region of the seat of the vessel (2), and having conduit means for communicating, via a feed line (7), an interior region of a vessel seated on the cone with a gas supply (6) or pump (10) located outside the chamber (3).”

Independent claim 27 is directed to an apparatus for sterilizing vessels comprising, inter alia, “a transport box (30) having a plurality of holes (31) therein for receiving and transporting a plurality of vessels (2) into the chamber (3), and said vessels (2) being seated with their openings virtually in pressure-tight fashion, said transport box (30) including a bottom flange for communication with a gas supply (6) or pump (10) located outside the chamber (3).”

Hoeck teaches an apparatus for sterilizing baby bottles with steam using an egg cooker. To support the nipples and bottles within the egg cooker, Hoeck teaches an insert 3 having upstanding ribs 13 (see, Figs. 1 and 2) forming seats 7. Within each seat 7 for the bottles 8, a frustoconical funnel 15 delivers the steam rising through an opening 18 to a tube 10, which carries the steam close to the upper end of the bottle.

Schultze also teaches an apparatus for sterilizing baby bottles using a warmer including an adaptor (Fig. 4) formed with an inverted pan base 8 with an upright tube 9. The base has a flat top 10 formed with one or more grooves 11 so that when the baby bottle is inverted and supported on the top 10 steam from the dome 3 may exhaust into a chamber 12 of the adaptor base into the tube and into the housing T around the outside of the bottle.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). None of Fraser et al, Hoeck and Schultze teaches or suggests an apparatus of the type recited in claim 24 including a cone providing a seat for mounting a vessel within a chamber, the cone having a groove on its exterior surface in the region of the seat of the vessel, and having conduit means for communicating, via a feed line, with an interior region of a vessel seated on the cone with a gas supply or pump located outside the chamber or an apparatus of the type recited in claim 27 including a transport box having a plurality of holes therein for receiving and transporting a plurality of vessels into a chamber, and said vessels being seated with their openings virtually in pressure-tight fashion, said transport box including a bottom flange for communication with a gas supply or pump located outside the

chamber. Accordingly, claims 24 and 27 and claims 25 and 28, dependent thereon, are not rendered obvious by the combined teachings of Fraser et al, Hoeck and Schultze.

Claim 26 is directed to an apparatus for sterilizing vessels comprising, inter alia, a “chain link transportation means for supporting a plurality of vessels for transportation into a chamber (3), and a duct (23) acting as a suction removal or gas supply rail disposed as a vessel mount, on which the vessels (2) are carried virtually in pressure-tight fashion, and said duct (23) being connected for with a gas supply (6) or pump (10) located outside the chamber (3).”

Schroeder teaches a method and a machine for preparing and filling containers with a product including conveying equipment 2 constructed as an endless chain conveyor and comprises bottle carriers 5, which can be swiveled relative to the conveying chains 3, 4 on the outside and locked in two different swiveling positions and which in each case have a number of bottle holders 7, disposed next to one another transversely to the transporting direction 6. The bottle carriers 5 form a modular unit, which extends transversely essentially over the width of the conveying equipment 2, and are supported consecutively at the conveying chains 3, 4 at mutually identical distances.

None of Fraser et al, Hoeck, Schulte and Schroeder et al teaches or suggests an apparatus of the type recited in claim 26 including a chain link transportation means for supporting a plurality of vessels for transportation into a chamber, and a duct acting as a suction removal or gas supply rail disposed as a vessel mount, on which the vessels are carried virtually in pressure-tight fashion, and said duct being connected for with a gas supply

or pump located outside the chamber. Therefore, claim 26 is not rendered obvious by the combined teachings of Fraser et al, Hoeck, Schultze and Schroeder et al.

Claims 27 and 28 have been rejected under 35 USC 103(a) as unpatentable over Fayet et al in view of Hoeck or Schultze.

Fayet teaches a method and apparatus for treating the inside surfaces of containers. The inner surface of a container (1) is treated in a plasma enhanced process whereby the plasma is confined to a narrow space between an inner member (3) and the inside surface of the container (1). The inner member (3) is adapted in shape to the inside shape of the container, it is hollow and has a porous or perforated wall of a non-conductive material or transparent for microwaves, depending on the process. The inner member (3) is connected to the supply of the gas and/or vapor mixture which is pressed through its wall into the space between inner member (3) and inside surface of the container (1). The porosity or perforation of the inner member (3) is designed such that when pressing the gas and/or vapor mixture through its wall it causes a pressure drop large enough for the pressure (p2) inside the inner body to be too high for plasma ignition and the pressure (p1) outside of the inner member to be adequately reduced for plasma ignition. For being applicable for containers with a narrow opening, the inner member (3) is preferably made of an elastically extensible material and is designed such that it is inflatable by the pressure difference.

Hoeck teaches an apparatus for sterilizing baby bottles with steam using an egg cooker. To support the nipples and bottles within the egg cooker, Hoeck teaches an insert 3 having upstanding ribs 13 (see, Figs. 1 and 2) forming seats 7. Within each seat 7 for the

bottles 8, a frustoconical funnel 15 delivers the steam rising through an opening 18 to a tube 10, which carries the steam close to the upper end of the bottle.

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Independent claim 27 is directed to an apparatus for sterilizing vessels comprising, inter alia, “a transport box (30) having a plurality of holes (31) therein for receiving and transporting a plurality of vessels (2) into a chamber (3), and said vessels (2) being seated with their openings virtually in pressure-tight fashion, said transport box (30) including a bottom flange for communication with a gas supply (6) or pump (10) located outside the chamber (3).”

In claim 27, the term “box” is used in according to its ordinary and customary meaning, i.e., a container having four side with a top and bottom. Applicants’ claimed transport box includes a plurality of holes for receiving and transporting a plurality of vessels into a chamber and a bottom flange for communication with a gas supply or pump located outside the chamber.

The examiner finds that both Hoeck and Schultze disclose the use of “boxes . . . that include flange portions that allow the cones to be communicated with a source of sterilization

gas.” The examiner finds that a “box” is shown by element 3 in Hoeck and by element 3 in Schulte.

This is a fundamental error of fact finding. Neither Hoeck nor Schultze teaches a transport **box** including a plurality of holes for receiving and transporting a plurality of vessels into a chamber and a bottom flange for communication with a gas supply or pump located outside the chamber. Element 3 of Hoeck is in the form of a flat, round plate having upstanding ribs 13 and holes 14, 18. There is no box taught or suggested in Hoeck

Element 3 in Schulte is the central dome of the base B. Base B has an inverted pan-like cross section and is adapted to be supported in a receptacle P. There is no box taught or suggested in Schulte. Further, Schulte teaches an apparatus for supporting a single bottle, not a plurality of bottles as found by the examiner.

Thus, even if it had been obvious to combine the teachings of Hoeck or Schulte with those of Fayet, one of ordinary skill would not have arrived at the structure set forth in claim 27.

Further, to establish a prima facie case of obviousness based on a combination of the content of various references, there must be some teaching, suggestion or motivation in the prior art to make the specific combination that was made by the applicant. In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); In re Raynes, 7 F.3d 1037, 1039, 28 USPQ2d 1630, 1631 (Fed. Cir. 1993); In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). The mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing

so. In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Suggestion arising from applicant's disclosure is impermissible as the basis for a rejection. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992).

In this case, there is no teaching, suggestion or motivation in the prior art to make the specific combination suggested by the examiner. Both Hoeck and Schutle teach an apparatus for sterilizing bottles using steam. Each apparatus has a support surface for mounting the bottles over a pan or container for boiling water. It is not understood how one of ordinary skill would have adapted the apparatus taught by Hoeck or Schutle for use in the method and apparatus taught by Fayet. The only teaching for making such a modification is found in applicants' own disclosure. The examiner's use of applicants' teaching is clearly improper.

Claim 26 has also been rejected under 35 USC 103(a) as unpatentable over Fayet et al in view of Schroeder et al.

Schroeder teaches a chain conveyor for bottles to be cleaned and filled. There is no motivation for combining the diverse teachings of Schroeder with the teachings of Fayet and the examiner has failed to explain how one would have combined those teachings to arrive at applicants' claimed device.

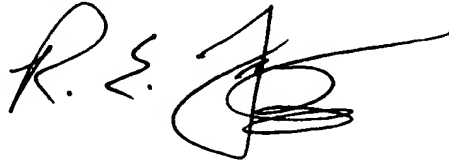
For example, claim 26 calls for a chain link transportation means for supporting a plurality of vessels for transportation into a chamber, and a duct acting as a suction removal or gas supply rail disposed as a vessel mount, on which the vessels are carried virtually in pressure-tight fashion, and said duct being connected for with a gas supply or pump located outside the chamber. No such structure is found in the chain conveyor taught by Schroeder. In

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Schroeder, the bottles are cleaned using sterile water (col. 2, l. 49), but there is no duct on which the vessels are carried virtually in pressure-tight fashion, said duct being connected for with a gas supply or pump located outside the chamber.

Entry of the amendment and allowance of the claims are respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. E. Greigg', with a stylized flourish at the end.

Ronald E. Greigg
Attorney for Applicants
Registration No. 31,517
CUSTOMER NO. 02119

GREIGG & GREIGG, P.L.L.C.
1423 Powhatan Street, Suite One
Alexandria, VA 22314

Tel. (703) 838-5500
Fax. (703) 838-5554

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